



# NPDES FACILITY VERIFICATION OF INSPECTION

State Form 47989 (R5 / 4-05)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

p-file

## FACILITY AND INSPECTION INFORMATION

NPDES permit number

IN0000108

Facility type code:

☐ 1 = Municipality ☒ 2 = Industry/Semi-Public ☐ 3 = Agricultural ☐ 4 = State/Federal  
☒ Major ☐ Minor

This is to verify that on 12-12-05 (month, day, year) an inspection of the specified facility was conducted by the undersigned representative of the Indiana Department of Environmental Management, Office of Water Quality.

TYPE OF INSPECTION:

☒ Compliance Evaluation Inspection (C)  
☐ Reconnaissance Inspection (R)  
☐ Industrial User Inspection (I)  
☐ Sanitary Sewer Overflow (V)

☐ Multimedia Screening Evaluation (M)  
☐ Combined Sewer Overflow inspection (Y)  
☐ Compliance Sampling Inspection (S)  
☐ Other

Name of facility inspected

BP Products North America, Inc

Location of facility inspected (number, street, city, county)

2815 INDRIS BLVD

Whiting, IN 46394-0710 Lake

Receiving waters / POTW

Lake Michigan

INTL - LAKE  
GEORGE BRANCH

Expiration date of permit

2-28-95

Name(s) of on-site representatives:

Rose Herrera

Title(s):

ENVIRONMENTAL ENGR

Phone: (219) 473-3393

Fax: ( )

Phone: ( )

Fax: ( )

Certified operator

DAVID OLEN

Number

14118

Class

D

☒ Full time ☐ Part time

Effective date of renewal

7-1-04

Date of expiration

6-30-06

Hours per week

40+

Name of responsible official

DANIEL J. SAKOWSKI

Title:

BUSINESS UNIT LEADER

Phone: (219) 473-3179

Fax: ( )

Address of responsible official (number, street, city, state, ZIP code)

(same)

Contacted ☐ Yes ☒ No

Facility design flow: 2

001-17M6D 002-120M6D

## AREAS EVALUATED DURING INSPECTION

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated, NA = Not Applicable)

<input checked="" type="checkbox"/> S	Receiving Waters Appearance	<input checked="" type="checkbox"/> S	Facility / Site	<input checked="" type="checkbox"/> S	Self-Monitoring Program	<input checked="" type="checkbox"/> NA	Compliance Schedules
<input checked="" type="checkbox"/> S	Effluent Appearance	<input checked="" type="checkbox"/> S	Operation } (B)	<input checked="" type="checkbox"/> M	Flow Measurement } (D)	<input checked="" type="checkbox"/> NA	Pretreatment
<input checked="" type="checkbox"/> N	Permit	<input checked="" type="checkbox"/> S	Maintenance	<input checked="" type="checkbox"/> S	Laboratory } (E)	<input checked="" type="checkbox"/> S	Effluent Limits } (G)
<input checked="" type="checkbox"/> NA	CSO / SSO (Sewer Overflow)	<input checked="" type="checkbox"/> S	Sludge Disposal } (C)	<input checked="" type="checkbox"/> S	Records / Reports } (F)		Other:

## PRELIMINARY INSPECTION / SCREENING FINDINGS \*

\* These findings are considered preliminary and include specific matters discovered during the inspection that the designated agent of the department believes may be a violation of law or a permit issued by the department.

SINGLE MEDIA INSPECTION:

☒ No violations were discovered with respect to the particular items observed during the inspection. (5)  
☐ Potential violations were discovered but corrected during the inspection. (4)  
☐ Potential violations were discovered and require a submittal and/or follow-up inspection. (2)  
☐ Potential violations were observed and may be referred to our Office of Enforcement. (1)  
☐ Additional information/review is required to evaluate overall compliance.  
☐ Other (3)

Comments regarding unsatisfactory ratings - Including rule or permit citation(s):

Additional comments regarding unsatisfactory ratings - Including rule or permit citation(s):

Comments regarding marginal ratings - Conclusions and recommendations:

- ① The outfalls 001 and 002 were clear with no oil sheen and outfall 003 and 004 were not discharging. Lake Michigan was clear with no oil sheen.
- ② All equipment was in operation except for preventative maintenance. ③ Sludge is being sent off site for disposal see attached manifest. ④ Flow measurement for outfall 001 is calculated or new flow meter should be installed when the new NPDES permit becomes effective.

MULTI-MEDIA SCREENING (please note that a multi-media screening is not a comprehensive evaluation of the compliance status of the facility)

- ☒ Multi-media screening not conducted.
- ☐ No violations were observed during the limited multi-media screening conducted.
- ☐ Potential problems or potential violations were discovered but corrected during the inspection.
- ☐ Potential problems or potential violations were discovered and will be referred to the Office(s) of \_\_\_\_\_ for further investigation and response.

#### POLLUTION PREVENTION

Pollution prevention is the preferred means of environmental protection in Indiana. The goal of pollution prevention is to promote changes in business and commercial operation, especially manufacturing processes, so that less environmental wastes are generated. Your participation in Indiana's pollution prevention program is entirely voluntary. Would your company like to be contacted by IDEM's Office of Pollution Prevention and Technical Assistance?

Re: Mercury ☒ Yes ☐ No

If you have any pollution prevention questions, you may contact our Office of Pollution Prevention and Technical Assistance at (317) 232-8172 or toll-free (800) 988-7901 or visit their web site at <http://www.in.gov/idem/oppta>.

#### SUMMARY AND CORRECTION INFORMATION

A summary of violations and concerns noted during the inspection were verbally communicated to the undersigned representative during the inspection. The facility should correct any deficiencies noted as soon as possible. Corrections made and verified during the inspection may still be cited as violations.

☐ Written inspection summary will be provided within 45 days.

☒ Written report provided at the conclusion of the inspection. If upon subsequent review, any changes to this report are deemed necessary, a revised report will be sent to the subject facility within 45 days.

#### IDEM REPRESENTATIVE:

Printed name	Signature	Telephone number	Date (month, day, year)	Time
Michael Koss	[Signature]	219 742-9180	12-12-05	In: 8:56 A Out: 2:50 P

#### OWNER / AGENT REPRESENTATIVE / TITLE:

Printed name	Signature	Title	Telephone number	Date (month, day, year)
Rose Herrera	[Signature]	Envil. Engineer	219 473-3393	12/12/05

#### FOR IDEM INTERNAL USE:

Section Chief or Regional Deputy Director	Date (month, day, year)	For:
[Signature]	12/22/05	<input type="checkbox"/> Follow up <input type="checkbox"/> Enforcement <input type="checkbox"/> NPDES permits <input type="checkbox"/> Other

<b>IDEM</b>	<b>NPDES Facility Inspection Report</b> <b>Comments and/or Recommendations</b>		PAGE <u>3</u> OF <u>3</u>
NPDES PERMIT #: <u>IN0000108</u>	FACILITY: <u>BP North Arena</u>	CITY: <u>Whiting</u>	YR/MO/DAY: <u>05-12-12</u>
<p>② ③ Reviewed Lab QC/QC Plus bench sheets all OK.</p> <p>④ Records satisfactory reviewed DMS, C.O.C., sample logs etc.</p> <p>⑤ No violations of numerical effluent limitations in 2005 through November.</p>			
Inspected by: <u>Michael Kuss</u>	Received by: <u>Roxe Herrera</u>	Date: <u>12-12-05</u>	

<b>IDEM</b>		<b>NPDES Facility Compliance Evaluation Checklist</b> Revised 11-17-05	
NPDES Permit #: <i>IN 0000108</i>	Facility Name: <i>BP NORTH AMERICA</i>	Month/Day/Year: <i>12-12-05</i>	

All evaluations indicated on this form are based upon the Inspector's observations at the time of the inspection.

**A. Receiving Waters Appearance**

				1. The receiving stream is visibly:
<input checked="" type="radio"/> Yes	No	N/E	N/A	a. Free of excessive deposits of settled solids.
<input checked="" type="radio"/> Yes	No	N/E	N/A	b. Free of excessive floating debris, oil, scum, or foam.

**B. Effluent Appearance**

				1. At the time of the inspection, effluent is essentially:
<input checked="" type="radio"/> Yes	No	N/E	N/A	a. Free of excessive solids.
<input checked="" type="radio"/> Yes	No	N/E	N/A	b. Free of excessive floating debris, oil, scum, or foam.

**C. Permit**

<input checked="" type="radio"/> Yes	No	N/E	N/A	1. Expired Permit has been administratively extended.
<input checked="" type="radio"/> Yes	No	N/E	N/A	2. The permit has been properly transferred. <i>UNKNOWN</i>
<input checked="" type="radio"/> Yes	No	N/E	N/A	3. Notification was given to IDEM of significant alterations or additions to the permitted facility.
<input checked="" type="radio"/> Yes	No	N/E	N/A	4. All discharges are permitted.
<input checked="" type="radio"/> Yes	No	N/E	N/A	5. Receiving waters are accurately described in permit.

**D. CSO/SSO (Sewer Overflow)**

<input checked="" type="radio"/> Yes	No	N/E	<input checked="" type="radio"/> N/A	1. CSO's are regularly monitored, and results are reported as required.
<input checked="" type="radio"/> Yes	No	N/E	<input checked="" type="radio"/> N/A	2. Collection system is maintained to prevent overflows.
<input checked="" type="radio"/> Yes	No	N/E	<input checked="" type="radio"/> N/A	3. Facility has met SSO reporting requirements.
<input checked="" type="radio"/> Yes	No	N/E	<input checked="" type="radio"/> N/A	4. Facility has mitigated adverse impacts.

**E. Facility/Site**

<input checked="" type="radio"/> Yes	<input checked="" type="radio"/> No	N/E	N/A	1. Facility has standby power or equivalent provision. <i>TWO Feed Sources but NO Standby power IF both feeds are lost</i>
<input checked="" type="radio"/> Yes	No	N/E	N/A	2. An adequate alarm or notification system for power or equipment failure is available.
<input checked="" type="radio"/> Yes	No	N/E	<input checked="" type="radio"/> N/A	3. Treatment system bypasses noted during the inspection are authorized by the permit.
<input checked="" type="radio"/> Yes	No	N/E	<input checked="" type="radio"/> N/A	4. Treatment system bypasses noted during the inspection have been reported as required.
<input checked="" type="radio"/> Yes	No	N/E	N/A	5. Facility grounds are maintained in a manner which allows adequate access and/or view of all units.
<input checked="" type="radio"/> Yes	No	N/E	N/A	6. Clear access is maintained to outfall(s) at the receiving stream.

**F. Operation**

				1. All facilities and systems necessary for achieving compliance with the terms and conditions of the permit are operated in a manner consistent with the following:
<input checked="" type="radio"/> Yes	No	N/E	N/A	a. All facilities and systems are operated efficiently.
<input checked="" type="radio"/> Yes	No	N/E	N/A	b. An adequate, qualified operating staff is provided to carry out the operation of the facility.
<input checked="" type="radio"/> Yes	No	N/E	N/A	2. A written Operation Plan has been established, including guidelines for each unit process, process control testing, sludge management, and wet weather operation (if needed).
<input checked="" type="radio"/> Yes	No	N/E	N/A	3. Sufficient sludge is wasted from treatment system at proper time intervals to maintain process efficiency.

## G. Maintenance

<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	1. A maintenance record system has been established and includes:
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	a. Maintenance history.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	b. Repair history.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	2. A preventative maintenance (PM) plan has been established and includes:
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	a. Instruction files for PM for all equipment.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	b. Schedules for all PM on all equipment.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	b. Spare parts and supplies inventory.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	3. Maintenance of equipment that could result in degradation of effluent quality is scheduled during non-critical water quality periods.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	4. Lift station inspections are adequate.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	5. Lift station cleaning and maintenance procedures are adequate.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	6. Collection system maintenance is adequate.

## H. Sludge Disposal

<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	1. Sufficient Sludge is disposed of to maintain overall efficiency of facility.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	2. Sludges, screenings, and slurries are properly handled and disposed of. <i>incinerated on site or sent off site for incineration.</i>

## I. Self-Monitoring Program

<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	1. Samples are taken at pre-designated locations.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	2. Samples are representative.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	3. Flow proportioned samples are obtained where needed.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	4. Facility conducts sampling and analyses on parameters and wastestreams specified in the permit.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	5. Facility conducts sampling and analyses at frequencies specified in the permit.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	6. Sample collection procedures include:
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	a. Samples are refrigerated during compositing.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	b. Proper preservation techniques are used.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	c. Containers and holding times conform to 40 CFR 136.3.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	7. Automatic sampling procedures include:
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	a. Sample intake tubing is placed in a well-mixed representative location.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	b. Proper tubing is used for parameters analyzed.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	c. Proper composite sample container is used for parameters analyzed.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	d. Proper refrigeration of composite container is documented.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	8. Sampling and analysis data include:
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	a. Dates, times, and location of sampling.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	b. Name of individual performing sampling.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	c. Analytical methods and techniques.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	d. Results of analyses and calibration.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	e. Dates of analyses.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	f. Name of person performing analyses.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	g. Instantaneous flow for flow weighted aliquots.

## J. Flow Measurement

<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	1. Primary device(s) appears to be properly installed and maintained.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	2. Secondary instrument(s) appears to be properly installed, calibrated, operated, and maintained.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	3. Flow is properly monitored as required by the permit.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	4. Flow charts and records are available for review.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	5. Calibration records are available for review.
<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	6. Effluent flow is used in calculating effluent loadings.

## K. Laboratory

<input checked="" type="checkbox"/>	Yes	No	N/E	N/A	1. Written laboratory QA/QC manual available.
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↳ Except outfall 001; flow is calculated from several influent sources.

New flow meter to be installed with new NPD permit.

## K. Laboratory

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	2. Chain-of-Custody procedures followed.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	3. Samples are properly stored.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	4. Approved analytical methods used as required by permit.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	5. If alternate analytical methods are used, proper written approval has been obtained.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/E	<input type="checkbox"/> N/A	6. Calibration and maintenance of instruments and equipment is satisfactory.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	7. QA procedures are adequate.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	8. QC procedures are adequate.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	9. Clean and orderly work area is available to help prevent contamination.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	10. Standards and appropriate blanks are available to perform daily check procedures.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	11. Glassware properly cleaned.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	12. Precision and accuracy of the analyses are sufficient.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	13. Use correct formulas to calculate final results.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	14. Laboratory data reported in proper form and units.
				15. Commercial Laboratory Used: <u>SIMA</u> - (T.R.C. + SE) Laboratory Name: <u>METROLAB</u> Laboratory Address: <u>250 W. 84th Dr. Meriden 46410</u> Laboratory Contact: <u>KAREN ZELOWSKI</u> Laboratory Phone: <u>203-769-8378</u>

## L. Records/Reports

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	1. Records and reports are maintained on site as required by permit.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	2. Information is maintained on site for 3 years.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	3. Results of monitoring (using approved methods) performed more frequently than required by the permit are reported.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	4. DMRs, MROs or MMRs, and CSODMR's are completed properly and accurately.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	a. "No Ex" column is accurate.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	b. Calculations are correct (including loadings, averages, etc.).
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	c. Signatory requirements are met.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	d. Reports are prepared by or under the direction of a certified operator.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	6. Monitoring records are adequate and include:
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	a. Lab bench sheets.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	b. Sample logs.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	c. Flow meter strip or circle charts and calibration records.
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input type="checkbox"/> N/A	d. Laboratory instrument calibration and maintenance records.
				7. Pretreatment records include:
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	a. Inventory of Industrial Waste Contributors.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	b. Monitoring data.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	c. Inspection reports.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	d. Compliance status records.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	e. Enforcement actions.

## M. Compliance Schedules

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	1. Monitoring milestones in the Schedule of Compliance have been met.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	2. Reporting milestones in the Schedule of Compliance have been met.

## N. Pretreatment

<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	1. Industrial or commercial discharges are regulated as required by the permit.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	2. The permittee has developed a Sewer Use Ordinance.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	3. The permittee enforces the Sewer Use Ordinance.
<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/E	<input checked="" type="checkbox"/> N/A	4. The facility operates without significant interference from industrial or commercial discharges.

## O. Summary of Monitoring Records Review.

[illegible]

Total Permit Limitation Violations 2005 0 Through Oct

DMx – Daily Maximum  
DMn – Daily Minimum

MA – Monthly Average

% - Percent Removal

MxWA – Maximum Weekly Average

## Comments Regarding Shaded YES Evaluations

- ④ BP submitted an updated NPDES permit renewal application in 2002 and they are submitting information to IPEN-OWQ Industrial permits section on an ongoing basis in an effort to help facilitate the NPDES permit renewal.
- ⑤ All identified in the NPDES NO additional unpermitted outfalls were identified during the inspection.
- ⑥ Alarms, light & sound for a wide array of parameters and functions.



**IDEM WASTEWATER PRE-INSPECTION CHECKLIST**

Name and Location of Facility to be Inspected:	NPDES Permit #:	GPS Coordinates Recorded:	Date to be Inspected:	Inspector:
Name: BP North America Town/City: Whiting County: Lake	IN0000108	NO	12-12-05	MPK

1.	<b>REVIEW RELEVANT PROGRAM PERMIT AND PERMIT APPLICATIONS</b>	<b>CHECK ONE:</b>			
		<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> N/E
IF NO, N/A, N/E:	Provide explanation or description why:				
IF YES:	Info Source/ Location/Date Reviewed	Inspector Notations Pertinent to Upcoming Inspection:			
	Files				

2.	<b>REVIEW PRIOR INSPECTION HISTORY &amp; REPORTS RELEVANT TO THE PROGRAM INSPECTION, PARTICULARLY ANY OUTSTANDING OR UNRESOLVED ISSUES.</b>	<b>CHECK ONE:</b>			
		<input checked="" type="radio"/> YES	<input type="radio"/> NO	<input type="radio"/> N/A	<input type="radio"/> N/E
IF NO, N/A, N/E:	Explanation:				
IF YES:	Info Source/Location/Date Reviewed	Inspector Notations Pertinent to Upcoming Inspection:			
	Files				

3.	<b>REVIEW PRIOR COMPLIANCE AND ENFORCEMENT HISTORY RELEVANT TO PROGRAM INSPECTION, PARTICULARLY: WARNINGS AND MINOR VIOLATIONS, FORMAL ACTIONS (OE &amp;/OR EPA)</b>	<b>CHECK ONE:</b>			
		<input type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> N/A	<input type="radio"/> N/E
IF NO, N/A, N/E:	Explanation: N/A				
IF YES:	Info Source/Location/Date Reviewed	Inspector Notations Pertinent to Upcoming Inspection:			

4.	<b>REVIEW FACILITY RESPONSES TO ALL OF THE ABOVE.</b>	<b>CHECK ONE:</b>			
		<input type="radio"/> YES	<input type="radio"/> NO	<input checked="" type="radio"/> N/A	<input type="radio"/> N/E
IF NO, N/A, N/E:	Explanation: N/A				
IF YES:	Info Source/Location/Date Reviewed	Inspector Notations Pertinent to Upcoming Inspection:			

<b>5.</b>	<b>REVIEW FACILITY RECORDS, REPORTS, SELF-MONITORING DATA CURRENTLY AVAILABLE.</b>	<b>CHECK ONE:</b>		
		YES	<input checked="" type="radio"/> NO	N/A
<b>IF NO, N/A, N/E:</b>	<b>Explanation:</b> Information is not readily available			
<b>IF YES:</b>	<b>Info Source/Location/Date Reviewed</b>	<b>Inspector Notations Pertinent to Upcoming Inspection:</b>		

<b>6.</b>	<b>REVIEW MAPS SHOWING FACILITY LAYOUT AND WASTE MANAGEMENT/ DISCHARGE SITES.</b>	<b>CHECK ONE:</b>		
		YES	<input checked="" type="radio"/> NO	N/A
<b>IF NO, N/A, N/E:</b>	<b>Explanation:</b> Not Necessary			
<b>IF YES:</b>	<b>Info Source/Location/Date Reviewed</b>	<b>Inspector Notations Pertinent to Upcoming Inspection:</b>		

<b>7.</b>	<b>REVIEW RECORDS OF CITIZEN'S COMPLAINTS.</b>	<b>CHECK ONE:</b>		
		YES	<input checked="" type="radio"/> NO	N/A
<b>IF NO, N/A, N/E:</b>	<b>Explanation:</b> None, in 2005 that are available.			
<b>IF YES:</b>	<b>Info Source/Location/Date Reviewed</b>	<b>Inspector Notations Pertinent to Upcoming Inspection:</b>		

<b>8.</b>	<b>REVIEW ANY PROCESS INFORMATION.</b>	<b>CHECK ONE:</b>		
		YES	<input checked="" type="radio"/> NO	N/A
<b>IF NO, N/A, N/E:</b>	<b>Explanation:</b> No Time allotted			
<b>IF YES:</b>	<b>Info Source/Location/Date Reviewed</b>	<b>Inspector Notations Pertinent to Upcoming Inspection:</b>		

<b>9.</b>	<b>REVIEW AND DETERMINE APPLICABLE REQUIREMENTS.</b>	<b>CHECK ONE:</b>		
		YES	<input checked="" type="radio"/> NO	N/A
<b>IF NO, N/A, N/E:</b>	<b>Explanation:</b> No Time allotted			
<b>IF YES:</b>	<b>Info Source/Location/Date Reviewed</b>	<b>Inspector Notations Pertinent to Upcoming Inspection:</b>		

**ADDITIONAL COMMENTS:**

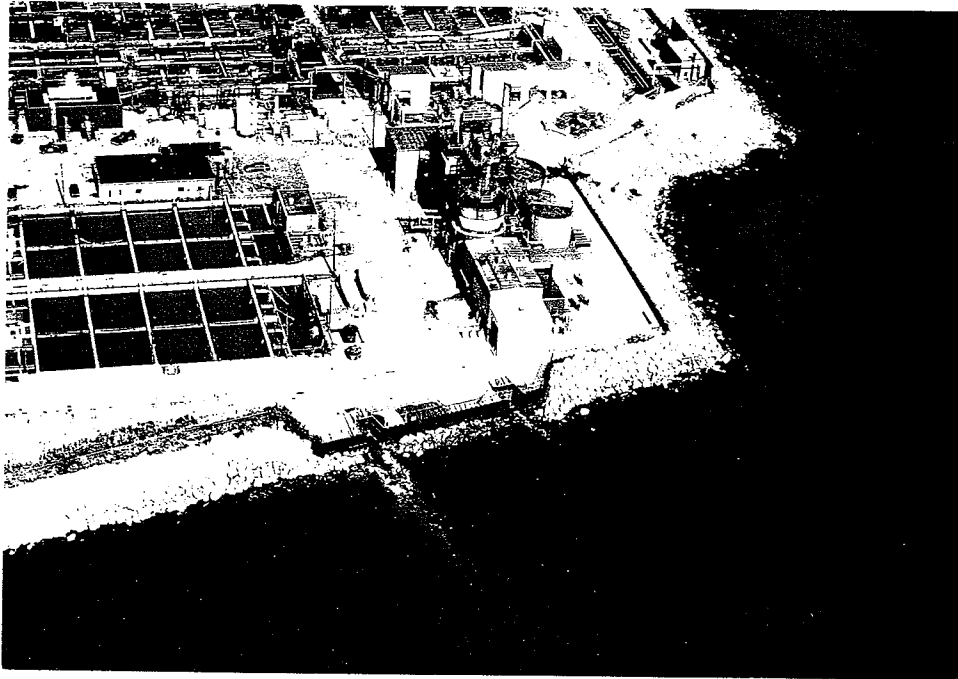


Photo #12 9-9-99 Amoco Oil Ref. Falls  
 CC 2 (left) and CC 1 (right)  
 Photo taken by R. M. McCallister  
 approx. 10:00 AM

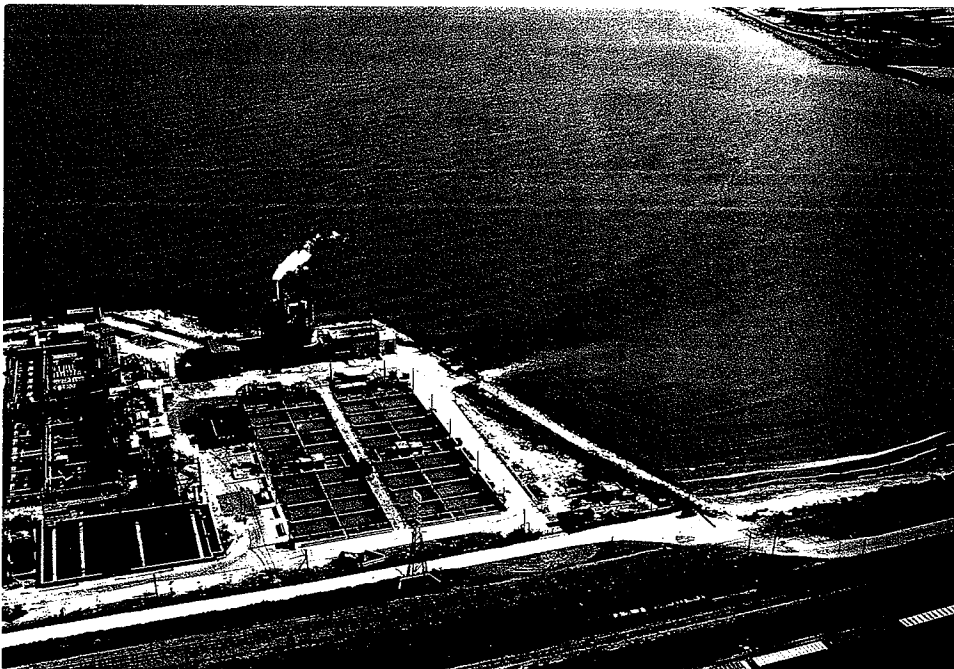


Photo #12 9-9-99 Amoco Oil Ref. and  
 Cove Area of Lake Michigan  
 Photo taken by R. M. McCallister  
 approx. 10:00 AM

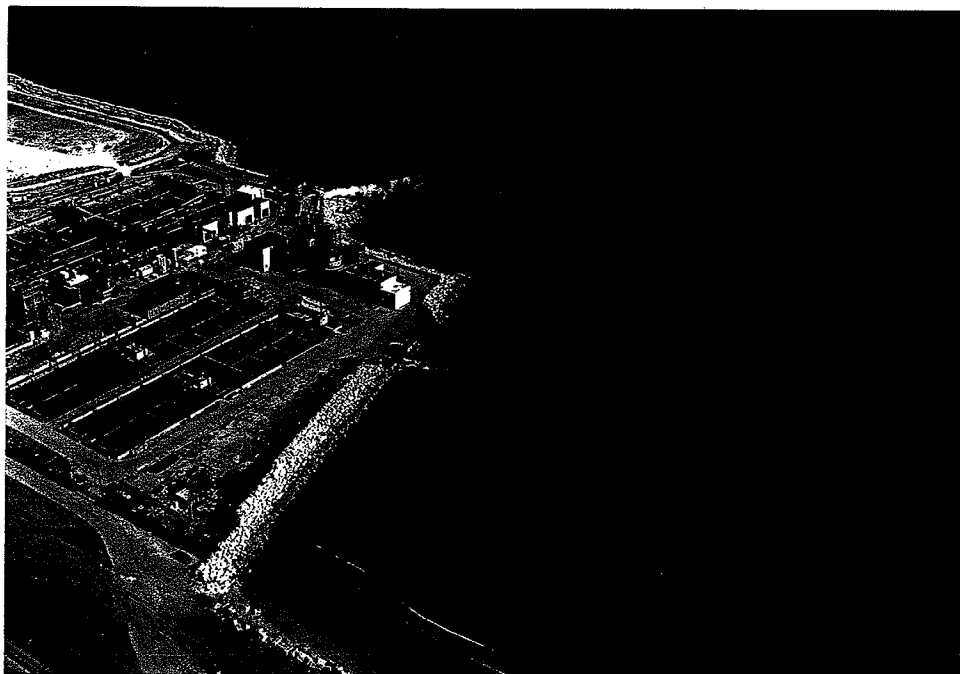


Photo #2 9-9-99- AMOCO OIL  
and COVE AREA OF LAKE MICHIGAN  
Photo taken by RAIPH MCCOLLERS  
APPROX: 10:00 AM.

# TREATMENT FACILITY CLASSIFICATION

The discharger has a Class D industrial wastewater treatment plant, classified in accordance with 327 IAC 8-12, Classification of Water and Wastewater Treatment Plants.

## PART I

### A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 001. Such discharge shall be limited and monitored by the permittee as specified below:

#### Discharge Limitations

Parameter	Quantity or Loading			Quality or Concentration [1]			Monitoring Requirements	
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report[2]	MGD	—	—	—	Daily	Continuous
TBOD <sub>5</sub>	4161	8164	lbs/day	Report	Report	mg/l	5 X Weekly	24 Hr. Comp.
TSS	3646	5694	lbs/day	Report	Report	mg/l	5 X Weekly	24 Hr. Comp.
COD	30323	58427	lbs/day	Report	Report	mg/l	3 X Weekly	24 Hr. Comp.
Oil and Grease	1368	2600	lbs/day	Report	Report	mg/l	5 X Weekly	Grab [3]
Phenolics (4AAP)	20.33	73.01	lbs/day	Report	Report	mg/l	3 X Weekly	24 Hr. Comp.
Ammonia as N	1030	2060	lbs/day	Report	Report	mg/l	5 X Weekly	24 Hr. Comp.
Sulfide	23.1	51.4	lbs/day	Report	Report	mg/l	1 X Weekly	24 Hr. Comp.
Total Chromium[4]	23.9	68.53	lbs/day	Report	Report	mg/l	1 X Weekly	24 Hr. Comp.
Hex. Chromium[4]	2.01	4.48	lbs/day	Report	Report	mg/l	1 X Weekly	24 Hr. Comp.
Fecal Coliform[5]	—	—	—	200	400	colonies/100ml	5 X Weekly	Grab
Residual Chlorine[5]	—	—	—	Report	0.05	mg/l	5 X Weekly	Grab
2378-CDD [6]	—	—	—	Report	Report	pg/l	4 X Yearly	24 Hr. Comp.
2378-CDF [6]	—	—	—	Report	Report	pg/l	4 X Yearly	24 Hr. Comp.
Total Selenium	—	Report	lbs/day	—	Report	ug/l	2 X Yearly	24 Hr. Comp.

- [1] The permittee shall begin reporting the effluent concentration of the parameters listed above which require reporting only as soon as possible but no later than three months after the effective date of the permit.
- [2] The daily maximum flow shall be reported as the highest total daily flow for each monthly reporting period.
- [3] Three Grabs Per 24 Hours (Oil & Grease)—Three individual samples taken at equally spaced time intervals during a 24-hour period. Each sample is individually analyzed and the arithmetic mean of the concentrations reported as the value for the 24-hour period. The number of grab samples taken in a 24-hour period may be reduced to one per day after a six month period after the effective date of the permit, if the effluent shows no violations of the oil and grease limitations listed above. At the end of the six month sampling period, the permittee may request, in writing, a review of these requirements. Upon review by the IDEM, the permit may be modified, after public notice and opportunity for hearing, to reduce the number of grab samples taken in a 24-hour period..

- [4] If test results from the analysis performed for total chromium reveal that the concentration is less than the limitations for hexavalent chromium, then the test for hexavalent chromium may be eliminated and reported as the same concentration as total chromium for that day.
- [5] Fecal coliform and residual chlorine are limited for the period from April 1 through October 31, annually, and only when the refinery sanitary sewers are discharging to the AMOCO WWTP. The monthly average for fecal coliform is calculated as a geometric mean. Residual chlorine testing of Outfall No. 001 is required only when directly chlorinating the outfall.
- [6] The permittee shall sample the effluent once every three months for the presence of 2378 substituted chlorinated dibenzodioxin (CDD) and chlorinated dibenzofuran (CDF) isomers using U.S. EPA method 1613 with a target detection limit as low as reasonably achievable but not to exceed the minimum levels listed in Table 2 of method 1613 for a period of three years after the effective date of the permit. The permittee must develop and implement a plan to quantify and reduce the potential for the discharge of CDDs and CDFs in accordance with the schedule of compliance in Part I. D. of this permit.
- a. The pH shall not be less than 6.5 nor greater than 9.0. The pH shall be monitored as follows: by a grab sample taken three times each week.
  - b. The discharge shall not cause excessive foam in the receiving waters. The discharge shall be essentially free of floating and settleable solids.
  - c. The discharge shall not contain oil or other substances in amounts sufficient to create a visible film or sheen on the receiving waters.
  - d. The discharge shall be free of substances that are in amounts sufficient to be unsightly or deleterious or which produce color, odor, or other conditions apart from that normally produced by a properly functioning WWTP.
  - e. Samples taken in compliance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entry into Lake Michigan.

2. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge from Outfall 002. Such discharge shall be limited and monitored by the permittee as specified below:

Discharge Limitations

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	—	—	—	Daily	Continuous
TOC (Intake)	—	—	—	Report	Report	mg/l	5 X Weekly	Grab
TOC (Discharge)	—	—	—	Report	Report	mg/l	5 X Weekly	Grab
TOC (Net)	—	—	—	Report	5.0 [1]	mg/l	5 X Weekly	Grab
Total Residual Chlorine	—	—	—	Report	0.05	mg/l	1 X Weekly	Grab
Oil and Grease(Intake)	—	—	—	Report	Report	mg/l	3 X Weekly	Grab
Oil and Grease (Discharge)	—	—	—	Report	Report	mg/l	3 X Weekly	Grab
Oil and Grease(Net)	—	—	—	Report	5.0 [1]	mg/l	3 X Weekly	Grab
Temperature	—	—	—	Report	[2]	BTU/Hour	5 X Weekly	Continuous

Outfall No. 002 is limited solely to non-contact cooling water, free from process and other wastewater discharges except as provided in Part III.1. of the permit. In the event that water treatment additives, other than chlorine, are to be used in the waters contributing to this discharge, the permittee shall apply to the IDEM for approval of the use of the new additive.

- [1] Total Organic Carbon (TOC) and Oil and Grease shall be limited on a net basis. The net result shall be calculated by subtracting the concentration value of the intake water from the concentration value of the gross discharge.
- [2] The net result shall be calculated by subtracting the temperature value of the intake water from the temperature value of the gross discharge. The net heat discharged shall be maintained at or below the following limits:
- 2.0 X 10<sup>9</sup> BTU/Hour maximum daily average
  - 1.7 X 10<sup>9</sup> BTU/Hour maximum monthly average
- a. The pH shall not be less than 7.0 nor greater than 9.0. The pH shall be monitored as follows: by a grab sample taken three times each week.
  - b. The discharge shall not cause excessive foam in the receiving waters. The discharge shall be essentially free of floating and settleable solids.
  - c. The discharge shall not contain oil or other substances in amounts sufficient to create a visible film or sheen on the receiving waters.

- d. The discharge shall be free of substances that are in amounts sufficient to be unsightly or deleterious or which produce color, odor, or other conditions in such a degree as to create a nuisance.
- e. Samples taken in compliance with the monitoring requirements above shall be taken at a point representative of the discharge but prior to entry into Lake Michigan.

# BP Amoco



## BP Amoco Oil

Whiting Refinery  
2815 Indianapolis Boulevard  
Post Office Box 710  
Whiting, Indiana 46394-0710  
219-473-7700

### **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

November 10, 1999

Mr. Michael Kuss  
Indiana Department of Environmental Management  
Office of Water Management  
504 North Broadway  
Suite 418  
Gary, IN 46402-1921

#### Regarding NPDES Facility Inspection Report

BP Amoco would like to respond to the IDEM NPDES Facility Inspection Report dated September 9, 1999, for Permit IN0000108. In this report, effluent and receiving waters were evaluated as "marginal" compliance. We disagree with this characterization and respectfully request that this Inspection Report be amended to reflect the following information.

Effluent quality for September was excellent, especially with respect to total suspended solids (TSS) and oil and grease (O&G), which are the parameters that might have an effect on visual quality for Outfall 001. The attached data substantiates excellent effluent quality and proper wastewater treatment plant operation at the time of the inspection. The effluent, although slightly discolored due to low turbidity, was readily complying with discharge limits. When viewing the water column immediately adjacent to the outfall from a height of several hundred feet, the effect of low turbidity on transparency of the water column is enhanced, and thus the "brown" appearance.

We also disagree that a potential sheen existed adjacent to the outfall 001 area. Possible reasons for this visual effect include mixing effects and meteorological conditions. There was no substantiation that what was observed from the helicopter was a sheen; and, all effluent quality data for both outfalls would not support the presence of a sheen.

Lastly, we disagree with the characterization of outfall 002 as being "discolored". What was most likely being observed was air bubble entrainment created by boulders in the outfall area which result in a rapid-like turbulent mixing. This effect has been compounded this summer due to the very low lake levels.

Thank you for your attention in reviewing this information and including it in the record of the aforementioned NPDES Inspection Report. Please call me (219-473-3287) if you have any questions.

A handwritten signature in cursive script, appearing to read 'S. D. Simko'.

Stephen D. Simko  
Environmental Superintendent  
Health, Safety and Environment

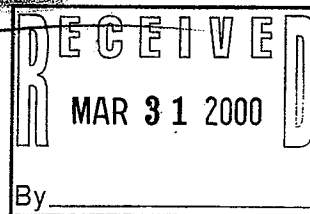
Sep-99	Outfall 001 TSS		Outfall 001 O&G		Outfall 002 OUT-O&G
DATE	mg/l	LB/D	mg/l	LB/D	mg/l
1	12.8	2060	4.1	660	<0.3
2	18.0	2762	4.1	629	--
3	--	--	4.4	576	<0.3
4	--	--	--	--	--
5	10.8	1450	--	--	--
6	10.0	1368	2.4	328	<0.3
7	9.6	1265	2.3	303	--
8	9.6	1033	2.0	215	<0.3
9	12.4	1758	2.2	312	--
10	--	--	1.9	271	<0.3
11	--	--	--	--	--
12	8.2	1156	--	--	--
13	7.6	1059	1.6	223	<0.3
14	4.4	624	1.0	142	--
15	5.2	776	0.9	134	<0.3
16	6.0	946	1.0	158	--
17	--	--	1.5	223	0.4
18	--	--	--	--	--
19	5.6	752	--	--	--
20	6.4	870	1.6	218	<0.3
21	10.2	1361	1.7	227	--
22	10.0	1326	4.0	530	<0.3
23	14.8	1814	4.2	515	--
24	--	--	3.9	514	<0.3
25	--	--	--	--	--
26	14.4	1922	--	--	--
27	11.6	1741	2.0	300	<0.3
28	9.2	1404	2.5	382	--
29	11.6	1867	1.4	225	0.4
30	4.4	675	0.7	107	--
AVERAGE	9.7	1363	2.3	327	<0.3
HIGHEST VAL.	18.0	2762	4.4	660	0.4
monthly avg limit:		3646		1368	--
daily max limit:		5694		2600	5.0

**BP Amoco**



**BP Amoco Oil**

Whiting Refinery  
2815 Indianapolis Boulevard  
Post Office Box 710  
Whiting, Indiana 46394-0710  
219-473-7700



**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

March 28, 2000

Mr. Terry Ressler  
Water Enforcement Section  
Office of Enforcement  
Indiana Department of Environmental Management  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, IN 46206-6015

Dear Mr. Ressler:

Per my phone messages to you on March 23, 2000, this memo documents our notification of the following as required by our NPDES permit (IN0000108) in section III.1. At approximately 10:30 a.m. March 23, 2000, the noncontact cooling water supply to the refinery's 11C Pipestill was interrupted. In order to prevent equipment damage, firewater was substituted for noncontact cooling purposes as allowed in our NPDES permit (section III.1). The substitution only occurred for 10 minutes; thus, at approximately 10:40 a.m. March 23, 2000, the use of firewater was discontinued.

Please call me at 219-473-3740 if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads 'Peter B. Beronio' followed by a stylized flourish.

Peter B. Beronio  
Health, Safety and Environment  
Environmental Engineer

<b>IDEM</b>		INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER MANAGEMENT <b>NPDES Facility Inspection Report</b>			100 NORTH SENATE AVENUE P. O. BOX 6015 INDIANAPOLIS, IN 46206-6015		
NPDES PERMIT #: <b>IN 0000108</b>		YR/MO/DAY: <b>99-09-08</b>	INSPECTION TYPE: <b>C</b>	INSPECTOR: <b>S</b>	FACILITY TYPE CODE: <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> Municipality <input checked="" type="checkbox"/> Industry <input type="checkbox"/> Semi-Public <input type="checkbox"/> State		
OVERALL FACILITY EVALUATION RATING: <b>3</b> <i>INSPECTION CONDUCTED ON 9-8-99 + 9-9-99</i>				COMPLIANCE STATUS: <input type="checkbox"/> Non-Compliance <input checked="" type="checkbox"/> Compliance			
Name and Location of Facility Inspected: <b>AMOCO OIL COMPANY 2815 INDIANAPOLIS BLVD</b>				Receiving Waters/POTW: <b>LAKE MICHIGAN + IHSC</b>		Permit Effective Date: <b>4-1-90</b>	
Town/City: <b>Whiting, IN</b> County: <b>LAKE</b>				Entry Time:	Exit Time:	Permit Expiration Date: <b>2-28-95</b>	
Name(s) of On-Site Representatives: <b>Pete Beronio NATALIE GRIMMER STEVE WARZYNIAK</b>				Title(s): <b>ENVIRONMENTAL ENGR ENVIRONMENTAL ENGR OPERATOR (optimization)</b>		Phone: <b>(219) 473-7140</b> Fax: <b>( ) - 5417</b> Phone: <b>( ) - 3276</b> Fax: <b>(219) 473-5379</b>	
Certified Operator: <b>DAVID OLEN</b>				Number: <b>14118</b> Class: <b>D</b> Exp: <b>6-00</b>		<input checked="" type="checkbox"/> Full Time <input type="checkbox"/> Part Time (Hours per week: )	
Name, Address of Responsible Official: <b>COLIN H. J. MACLEAN STAN SORRELS, HEALTH, SAFETY AND ENVIRONMENTAL 473-3857</b>				Title: <b>Whiting Refinery BUSINESS UNIT LEADER</b>		Phone: <b>(219) 473-3149</b> Fax: <b>( )</b>	
				Contacted: <input checked="" type="checkbox"/> Yes <b>STAN SORRELS</b> <input type="checkbox"/> No			
Areas Evaluated During Inspection (S=Satisfactory, M=Marginal, U=Unsatisfactory, N=Not Evaluated, N/A=Not Applicable)							
② S	Effluent	S	Facility Site Review	③ M	Flow Measurement	N/A	Pretreatment
② S/M	Receiving Waters LM/IHSC	S	Operation & Maintenance	④ S	Laboratory	-	Other:
① M	Permit <b>Expired</b>	N/A	CSO/SSO (Sewer Overflow)	S	Self-Monitoring Program	④ S	<b>SAMPLING</b>
N	Compliance Schedules	S	Sludge Disposal <b>ENVIRONMENTAL + H2 WASTE</b>	S	Records/Reports	⑤ S	<b>HEAT RELIEF RATE</b>
COMMENTS: ① The permit expired in 1995, and AMOCO did re-apply in 1994. In 1998 AMOCO submitted a REVISED MIXING ZONE demonstration (VOL. IIR). ② There have been ZERO NPDES permit limit exceedences in 1999, through July. Both outfalls 001 and 002 were clear and were <u>not</u> producing oil sheens on Lake Michigan at the time of this inspection. Outfall 001 did have a brownish color, but no discoloration of Lake Michigan was observed, and the effluent was clear (free of turbidity and solids). There was no discharge at outfalls 003 and 004, as observed on 9-9-99. Oil sheens were observed on the IHSC, near outfall 004, but these sheens were <u>not</u> attributable to outfall 004, since there was no discharge on 9-9-99, and none recorded for the last few months at outfall 004.							
Name(s) and Signature(s) of Inspector(s): <b>Michael Kuss</b>				Date: <b>9-9-99</b>		Office/Telephone: <b>219 681-6712</b> <b>IDEM (317) 233-2444</b>	
Received By:				Date:		Referred to:	
Section Chief: <b>WJ Zeller</b>				Date: <b>9/27/99</b>		For: <input type="checkbox"/> Follow-up <input type="checkbox"/> Enforcement <input type="checkbox"/> NPDES <input type="checkbox"/> Other	

## KEY TO REPORT

### INSPECTION TYPE:

R: RECONNAISSANCE C: COMPLIANCE EVALUATION  
I: INDUSTRIAL USER INSPECTION W/PRETREATMENT

### INSPECTOR:

S: STATE R: EPA REGIONAL

### FACILITY TYPE CODE:

1: MUNICIPALITY 2: INDUSTRY / SEMI-PUBLIC  
3: AGRICULTURAL 4: FEDERAL

### OVERALL FACILITY EVALUATION RATING:

5: SATISFACTORY (COMPLIANCE)  
3: MARGINAL (BORDERLINE)  
1: UNSATISFACTORY (NON COMPLIANCE)

OFFICE OF WATER MANAGEMENT - INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WASTEWATER TREATMENT PLANT INSPECTION FORM

NPDES PERMIT # IN 0000108

MUNICIPALITY AMOCO Person Interviewed \_\_\_\_\_

COMMENTS and/or RECOMMENDATIONS:

③ The flow measurement at outfall 001 is not measured by a separate flow meter dedicated to this outfall. The flow value is calculated by measuring the influent to the treatment facility and subtracting out measured flow for various "waste streams".\* The NPDES permit specifies that the discharge flow be measured continuously at outfall 001. It is recommended that Amoco install a flow meter which will continuously measure the actual discharge flow from outfall 001.  
\*(see attached calculation sheet for 9-7-99).

When conducting flow measurement calibrations it is recommended that the meters be tested at 25% increments of total scale (0, 25%, 50%, 75% and 100%). This will assure accuracy throughout the expected flow range.

④ The overall dating given to the Laboratory is satisfactory, however the following recommendations are made: samples for pH should be analyzed immediately (within 2 hours as per standard methods); samples for Res. Cl<sub>2</sub> should be analyzed immediately (within 30 minutes as per standard methods); samples for Cl<sub>2</sub> should have the time of analysis recorded and should be reported as mg/lh Cl<sub>2</sub>; Improvements could be made to the sampling chain of custody forms.

OFFICE OF WATER MANAGEMENT - INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
WASTEWATER TREATMENT PLANT INSPECTION FORM

NPDES PERMIT # IN 0000108

MUNICIPALITY Amoco

Person Interviewed \_\_\_\_\_

COMMENTS and/or RECOMMENDATIONS:

- ⑤ There are no thermal limitations for outfall 001 and the temperature limit for outfall 002 is NOT a temperature limit, but a heat ejection ~~RATE~~ limitation. The limit at 002 is:

$2.0 \times 10^9$  BTU/hr (Daily <sup>MAX</sup> ~~AVG~~) (assumed ~~discharge~~ <sup>or rate of 2x</sup>)  
 $1.7 \times 10^9$  BTU/hr (monthly Avg)

Amoco calculates the BTU/hr rate by recording the intake and discharge temperatures 12x daily and then using the intake average temperature and discharge average temperature to calculate the daily average BTU/hr rate. Amoco has complied with these limitations, but the actual discharge temperatures at both outfalls 001 and 002 are relatively high. Outfall 001 was 101°F and outfall 002 was 102°F on 9-7-99.

Inspector: \_\_\_\_\_



# INDUSTRIAL INSPECTION

State Form 35969 (R2/2-94)

☒ Satisfactory  
☐ Marginal  
☐ Unsatisfactory

Indiana Department of Environmental Management  
 Office of Water Management  
 105 S. Meridian Street  
 Indianapolis, Indiana 46225

PAGE 4

Name of company <b>AMOCO OIL COMPANY</b>		Name of inspector <b>MICHAEL KUSS</b>	
Address of company (street and number or Rural Route) <b>2815 INDIANAPOLIS BLVD</b>		Date (month, day, year) <b>9-8-99</b>	
City <b>Whiting</b>	County <b>LAKE</b>	Telephone number <b>(219) 473-5417</b>	
ZIP code <b>46394</b>	Name of responsible official <b>COLIN H. J. MACLEAN</b>		
Name(s) of individual(s) contacted <b>Pete Beronio Katelic Grimmer Environmental Eng'rs</b>			
Permit number <b>IN0000108</b>	Name of receiving stream and/or POTW <b>LAKE MICHIGAN ECHS</b>		
Type sewage disposal <b>City of Whiting - Hammond</b>	Name of certified operator <b>DAVID OLEN</b>		
Number of employees <b>1500</b>	Class <b>D</b>	Number <b>14118</b>	

Type of inspection  
☐ O & M ☒ CEI ☐ CSI ☐ Follow-up ☐ Pretreatment  
☐ Other (specify) \_\_\_\_\_  
☐ Products **gasoline, heating fuel, jet fuel, diesel fuel, asphalt and coke**

Outfall	Water Use	Treatment	July Waste Flow 99	Appearance
001	Air Process + stormwater	* (see below)	18.0 MGD	Brownish in color, clear, no oil sheen
002	Air non-contact	OIL SEPARATOR	105 MGD	clear, no oil sheen
003	stormwater	<del>oil water separator</del>	NO Discharge	NO Discharge
004	stormwater	NONE	NO FLOW DATA	NO Discharge

Other water uses  
~~API~~ **API Grit removal, API separation, Equalization, DAF, Activated Sludge, Clarification, filtration**

EFFLUENT DATA mg / l / (lb/d)				
Parameter		SEE ATTACHED SUMMARY OF VIOLATIONS		
Permit Limits		for 1997, 1998 + 1999 and		
Daily Max.		COPY OF JULY 1999 MRO.		
Daily Avg.				
Actual Data		THE WATER QUALITY DATA FOR SEPTEMBER		
Daily Max.				
Daily Avg.				

Period covering:

Comments

**1999  
SUMMARY  
OF  
NPDES PERMIT LIMIT VIOLATIONS**

FACILITY AMOCO  
NPDES PERMIT No. IN 0000108

1999

## **LIST OF NPDES PERMIT LIMIT VIOLATIONS**

MONTH	DATE(S)	TYPE	OUTFALL	PARAMETER	REPORTED VALUE	PERMIT LIMIT	PERCENT DEVIATION
JAN	NONE						
FEB	NONE						
MAR	NONE						
APR	NONE						
MAY	NONE						
JUNE	NONE						
JULY	NONE						
AUG							
SEP							
OCT							
NOV							
DEC							
TOTAL NUMBER OF VIOLATIONS:							

TOTAL NUMBER OF VIOLATIONS:

DMx - Daily Maximum  
DMn - Daily Minimum  
MA - Monthly Average  
WA - Weekly Average

Report Prepared by Michael Koss Title ENVIRON ENG 2 - IOEN

1998  
SUMMARY  
OF  
NPDES PERMIT LIMIT VIOLATIONS

FACILITY Amoco Oil Co.  
NPDES PERMIT No. IN 000108

1998

LIST OF NPDES PERMIT LIMIT VIOLATIONS

MONTH	DATE(S)	TYPE	OUTFALL	PARAMETER	REPORTED VALUE	PERMIT LIMIT	PERCENT DEVIATION
JAN	NONE						
FEB	NONE						
MAR	3-9-98	DMX	001	BOD	9674 16/1	8164 16/1	
	3-10-98	DMX	001	BOD	19833 16/1	8164 16/1	
	3-9-98	DMX	001	COD	13782 16/1	58427 16/1	
	3-10-98	DMX	001	COD	75429 16/1	"	
	3-9-98	DMX	001	TSS	46402 16/1	5694 16/1	
	3-10-98	DMX	001	TSS	6159 16/1	"	
	3-9-98	MA	001	TSS	6698 16/1	3646 16/1	
	3-9-98	DMX	001	046	191 505 16/1	191 505 16/1	
	3-10-98	DMX	001	046	2723 16/1	"	
	3-11-98	DMX	002	046	6.6 mg/L A	5.0 mg/L A	
APR	NONE						
MAY	NONE						
JUNE	NONE						
MAY	5-20	DMX	002	RES. CL		0.05 mg/L	
JUL	NONE						
AUG	NONE						
SEP	NONE						
OCT	NONE						
NOV.	NONE						
DEC	NONE						
TOTAL NUMBER OF VIOLATIONS:				(11)			

\*NOTE: EACH OF THE EXCEEDANCES IN MARCH WERE THE RESULT OF AN INCOMPLETE POWER OUTAGE AT THE REFINERY AS A RESULT OF THE SEVERE WINTER STORM THAT AFFECT NORTHWEST INDIANA ON 3-9-98. THE POWER OUTAGE CAUSED AN UPSET CONDITION AT THE TREATMENT FACILITY, AS PER AMOCO'S REPORT DATED 3-31-98. (SEE ATTACHED COPY)

DMX - Daily Maximum  
DMN - Daily Minimum  
MA - Monthly Average  
WA - Weekly Average

Title ENVIRON. ENGR. - IDEM

Report Prepared by Michael Kuss

# NPDES PERMIT LIMIT VIOLATIONS

NPDES PERMIT No. IA 0000108

## LIST OF NPDES PERMIT LIMIT VIOLATIONS

MONTH	DATE(S)	TYPE	OUTFALL	PARAMETER	REPORTED VALUE	PERMIT LIMIT	PERCENT DEVIATION
JAN	NONE						
FEB	NONE						
MAR	3-9-97	DMX	004	pH	9.1	9.0	
APR	NONE						
MAY	NONE						
JUNE	NONE						
JULY	7-11-97 7-28-97	OIL SHEEN OIL SHEEN	002 002	Reported at 002, ON Lake Michigan Reported at 002, ON Lake Michigan			
AUG	NONE						
SEPT	9-13-97	OIL SHEEN	002	Reported at 002, ON Lake Michigan			
OCT	10-10-97	OIL SHEEN	002	Reported at 002, ON Lake Michigan			
NOV	11-22-97	OIL SHEEN	002	Reported at 002, ON Lake Michigan			
DEC	NONE						
TOTAL	NUMBER OF VIOLATIONS						

Report Prepared by Michael Koss

Title ENVIR. ENG'G - FDEM-0000 DMN - DA

MA - Monthly Average  
WA - Weekly Average



**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

March 31, 1998

Mr. Stephen Judith  
Indiana Department of Environmental Management  
Office of Enforcement  
Water Enforcement Section  
100 North Senate Street  
P.O. Box 6015  
Indianapolis, IN 46206-6015

**Amoco Petroleum Products  
Refining Business Group  
Whiting Refinery**

2815 Indianapolis Boulevard  
Post Office Box 710  
Whiting Indiana 46394-0710  
219-473-7700

Upset Conditions Resulting from March 9 Power Outage

On March 9, 1998 the Amoco Whiting Refinery and the refinery's wastewater treatment plant (WWTP) experienced a complete power outage as a result of the severe winter storm and ensuing NIPSCO area-wide power outage. As a direct result of the power outage, the WWTP experienced an upset condition, resulting in NPDES permit exceedances. The following information documents these issues.

Description of Power Outage

A severe winter storm with extremely high winds, wet snow and ice, impacted Northwest Indiana on March 9, 1998. That morning, the NIPSCO Electrical Grid for Northwest Indiana experienced power outages. This grid supplies Amoco and is considered to be a highly reliable system. However at 8:39am, weather conditions caused NIPSCO's Sheffield substation connection to the refinery to be lost. Normally the loss of this connection would not have presented an immediate problem since a second electrical connection from NIPSCO's Marktown substation to the refinery is also in place. Yet, sixteen seconds after losing the Sheffield connection, NIPSCO's electric generation source to the Marktown substation was also lost. Thus, the supply of electrical power from NIPSCO to the refinery was completely lost.

Since Amoco's internal power station cannot produce all the electricity the refinery requires, the refinery's electrical load-shed system automatically started tripping process unit breakers, according to a prioritized schedule, shutting down many of the refinery's process units. The WWTP is considered high priority and is not on this load-shed list; it receives power as long as the power station is operational.

However, at 8:52am, when the Amoco power station could not handle the remaining load, the WWTP was among the units that lost electrical power.

#### Effect of Power Outage on WWTP Operations.

The loss of power to the WWTP resulted in the following equipment outages (please refer to the attached WWTP flow diagram):

- All pumps in the pretreatment section of the WWTP were unoperable. Incoming flow built up in the the oil-water separator and air flotation unit.
- Due to loss of compressed air, the air flotation unit could not remove dissolved oil and suspended solids. This allowed unusually high loadings of dissolved oil and grease and suspended solids to the aeration tanks when flow was reestablished.
- Surface aerators lost power. The residual dissolved oxygen that is normally maintained in the aeration tanks was quickly consumed, within minutes of the power outage. This led to near-anaerobic conditions in the aeration tanks while the aerators were shut down.
- The clarifier recycle pumps were unoperable.
- The final filter backwash pumps were unoperable.
- Due to blizzard, sub-freezing conditions and the loss of steam tracing, which is used for freeze protection, many critical indicators and controllers were frozen.

#### Recovery of WWTP Operations on March 9

As discussed above, all refinery process units, including the WWTP, were shut down due to the power outage. The NIPSCO Marktown substation connection to the refinery was reestablished first and the WWTP's electrical power supply was reestablished by approximately 10:30am, resulting in a power outage of approximately 90 minutes. Although the WWTP was the first refinery unit to be restored to operation, many refinery process units were shut down for several days and some as long as 10 days.

WWTP personnel were able to restore most major equipment operation by early afternoon. This included pumps required to reestablish flow through the plant, including the clarifier recycle pumps and final filter backwash pumps. The aeration tank surface aerators were reactivated.

Steam and air supply remained out-of-service throughout the refinery until later in the day. Given the blizzard and sub-freezing conditions, instrumentation froze and had to be manually thawed with steam hoses and restarted. Due to these instrumentation problems, flow to the storm surge and equalization tanks was not reestablished until later in the day.

Until the air supply was reestablished later in the afternoon, the air flotation unit was not effective in removing suspended solids and dissolved oil from the

wastewater, resulting in very high loadings of suspended solids and dissolved oil and grease to the aeration tanks.

### Summary of Exceedances

Loss of power to the WWTP resulted in an upset condition. As discussed, unusually high loadings of suspended solids and dissolved oil to the aeration tanks, combined with the earlier period of anaerobic conditions (while the aerators were shut down), resulted in highly-stressed activated sludge. This resulted in severe foaming in the aeration tanks and clarifiers.

Although the clarifier beds were maintained during this incident, some of the foaming activated sludge did not sufficiently settle in the clarifiers. This condition overwhelmed the final filters and resulted in high suspended solids levels in the effluent. Final filters were backwashed one every 20 minutes (the maximum rate possible), as opposed to the normal frequency of one every 60-90 minutes. This demonstrates that operational measures available to the WWTP to mitigate the extent of the exceedances were implemented.

In addition, high loadings of dissolved oil and grease to the activated sludge reactors led to high levels in the effluent. The combination of high levels of both suspended solids (TSS) and oil and grease (O&G) led to high levels of both chemical oxygen demand (COD) and biological oxygen demand (BOD) in the effluent. The daily maximum permit limits for TSS, O&G, COD and BOD were exceeded on March 9. Since the upset condition continued into March 10, these limits were also exceeded on March 10. Notifications of these exceedances were made to IDEM, Office of Enforcement. Below is a summary of NPDES permit exceedances for Outfall 001 (WWTP effluent) on March 9 and 10.

as pounds/day	TSS	O&G	COD	BOD
March 9	46,402	2,705	63,782	9,674
March 10	61,159	2,723	75,429	19,833
March 11	1,348	749	7,040	1,168
Daily Maximum Limit	5,694	2,600	58,427	8,164

Since Wednesday, March 11, all NPDES daily maximum permit limits for Outfall 001 have been met. In fact, WWTP operating data indicate that the effluent quality was much improved by noon on Tuesday, March 10. Given the magnitude of equipment outages on March 9 and the subsequent upset conditions, this demonstrates that effective measures were taken by WWTP personnel to return the WWTP to a highly functional state in an expedited manner.

Although not an exceedance of a daily maximum permit limit, there was also an unsightly appearance at Outfall 001 on March 17. A film was observed within 25 feet of the outfall and discoloration within 100 feet. IDEM, Office of Enforcement, was notified of this condition as well. This outfall condition cleared up over the next several days. As mentioned earlier, a foam layer had built up on top of the clarifiers during the upset condition. This foam slowly sloughed-off the clarifiers; however, the filters were not completely effective in removing it.

There was one exceedance on March 11 for O&G for Outfall 002, the once through cooling water (OTCW) effluent. This was also related to the power outage. Heat exchangers on the OTCW system were kept as warm as possible during the shut-down period with OTCW. However, heat exchanger operating conditions were very different during the shut-down than normal operating conditions, especially pressure and temperature conditions. This led to a small heat exchanger leak. Operating conditions were adjusted and the leak was stopped. Monitoring of heat exchanger systems throughout the refinery was enhanced throughout the refinery start-up period. There were no further Outfall 002 exceedances.

#### NPDES Permit Definition of "Upset"

The permit exceedances discussed above were unintentional and temporary and were due to factors beyond the reasonable control of the permittee. The WWTP is well-operated, well-maintained, and designed to readily meet its NPDES permit conditions. This is demonstrated by the refinery's excellent NPDES permit record. No operational errors contributed to the exceedances.

In accordance with NPDES Permit No. IN0000108 (Part II, Section B, Paragraph 3.C), the following addresses conditions necessary to demonstrate an upset.

1. The cause of the upset was identified as the NIPSCO power outage, which was caused by severe and unusual winter storm weather conditions.
2. The WWTP was at the time of the upset being operated according to proper operation and maintenance procedures.
3. The refinery and the WWTP took all reasonable steps, including the following, to minimize any adverse impact to the environment resulting from the upset.

First, full operation of the WWTP was achieved as quickly as possible. The WWTP was first refinery unit to regain power. In fact, most of refinery units remained out of service for up to several days afterward, some up to 10 days. In spite of highly adverse weather conditions, instrumentation freeze-ups and other difficulties, the WWTP was running by early afternoon and was fully operational by late afternoon of March 9.

Second, WWTP operational measures were taken to minimize the impact of the upset. At no time during the upset was wastewater flow bypassed around any of the WWTP operating units. Surge capacity was used. Final filter backwash frequency was increased to the maximum rate. Clarifier beds were maintained.

Third, in order to reduce wastewater flow to the WWTP, the watershedding system was activated: all wellpoint systems were temporarily shutdown; tank waterdraws were delayed; cooling tower blow-downs were blocked in; desalter brine and mudwashes and other refinery process related flows were not in service for several days.

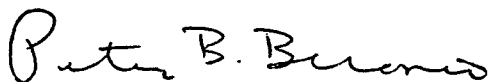
Fourth, in order to reduce slop oil flow to the WWTP's oil-water separator several vac trucks were operated within the refinery around the clock for several days.

Fifth, as the refinery process units were brought back in service, measures were taken to mitigate any impact on WWTP operations. As a result, the WWTP was able to meet its permit limits with its NPDES permit even though essentially the entire refinery had to be brought back in service.

### Summary

As a direct result of the NIPSCO power outage on March 9, which was caused by severe and unusual winter storm weather conditions, the WWTP experienced an upset condition. Daily maximum NPDES permit limits for Outfall 001 (WWTP effluent) were exceeded on March 9 and March 10. Full operation of the WWTP was restored by the afternoon of March 9. Outfall 001 maximum daily permit limits were met March 11. Also upset-related, Outfall 002 (once through cooling water) experienced an exceedance on March 11, and Outfall 001 had an unsightly appearance on March 17.

If you have any questions regarding the upset condition described above, or any other issue, please call me at 219-473-3740.



Peter B. Beronio  
Environmental, Health and Safety  
Team Leader - Water

Cont. # P353 264 659

Attachment

# Wastewater Treatment Plant - Water Flow Diagram

## Amoco Oil Company - Whiting Refinery

